



WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**

BRIAN BOYLE  
Commissioner of Public Lands

OLYMPIA, WA 98504

MEMORANDUM

To: Lee Dorigan  
NW Regional Office  
Department of Ecology

From: David W Jamison, Ph.D.  
Senior Marine Scientist  
Division of Aquatic Lands

Date: August 30, 1989

Subject: Unimar 8/21/89 sampling plan

I have the following comments on the Unimar plan. I understand that you will carry these comments to EPA for me.

Benthic community determination:

1. There should be five rather than four replicates per station for statistical power.

2. The grab sample should be of at least 10 cm of bottom sediment not 2 cm as described in the plan. The depth of the grab sample should be kept constant in so far as possible within and between each station. There should be no more than 10% variance within stations. Every effort should be made to locate reference stations in comparable depths and sediment types as the stations of interest.

3. The organisms must be identified to the species level. They must be enumerated by species as well as taking blotted wet weights and dry weights.

4. Water depth at each station must be recorded.